Forestry Bulletin SA-FB/P 44 May 1982

FOREST PEST MANAGEMENT

United States Department of Agriculture Forest Service

Southeastern Area State and Private Forestry 1720 Peachtree Road N W Atlanta Ga 30367

a Technology Update

Southern Pine Beetle Fact Sheet Number 25*

UTILIZATION OF BEETLE-KILLED SOUTHERN PINE BASED ON TREE APPEARANCE

Although SPB damage is a recurrent problem for the forest manager in the South, it does not turn trees into useless waste. If the trees are harvested and processed soon after attack, they can be used for a wide range of wood products. Salvage--or the lack of it--is regulated by the demand for timber and the location and quality of the SPB-killed trees.

Many wood buyers and processors are reluctant to purchase beetle-killed trees, believing they are virtually worthless after the bark loosens. This is not the case. Bark loosens very soon after SPB attack, but the trees remain usable for months for certain products, and in some parts of the region, the timber is sound for years. Better utilization of SPB-killed trees can increase profits, both for the landowner and the timber processor.

Appearance Classes for Standing Beetle-Killed Pines

Beetle-killed southern pine trees which are left standing in the woods go through various changes in external appearance. Foliage color changes from green to yellow to red. This is followed by the total loss of needles with twigs still remaining attached, the loss of twigs and small branches, breakage of larger branches, and finally, the loss of tops and breakdown of trunks. The bark becomes loose and easy to peel from the trunk soon after a beetle attack. The presence or absence of bark is <u>not</u> a reliable guide to the suitability of SPB-killed trees for various wood products.

Research indicates that beetle-killed trees generally can be divided into two major appearance classes. Field crews can use these appearance classes to gauge the usefulness of timber, without knowing what killed the trees or how long the trees have been dead.

"Class A" trees range from trees with needles to those with no needles but with twigs still attached. "Class B" trees range from trees with smaller branches attached to those with broken tops.

Blue-stain fungi and ambrosia beetles are the major causes of deterioration in "Class A" trees, although there may be initial and limited activity by other wood-destroying beetles and fungi. In "Class B" trees, the decay and insect damage has reached the stage where trees are breaking up and some parts have dropped to the ground.

The rate of change in tree appearance depends on several variables, including the time of year when the trees are attacked and killed and local climatic conditions.

The length of time a beetle-killed tree remains in each of the two classes also varies widely. In the Southeast, the appearance of beetle-killed trees is a better guide to their utilization than the length of time they have been dead.

Use of Beetle-Killed Pines Based On Appearance

The suitability of beetle-killed southern pine trees for various wood products depends on how much damage has been caused by fungi and insects. Appearance classes provide a simple guide to judge the extent of damage. It is not necessary to know when the trees were killed, or to make careful determinations of wood quality. Table 1 offers guidelines for the use of beetle-killed trees in "Class A" and "Class B."

*When requesting additional copies, please refer to "Southern Pine Beetle Fact Sheet No. 25"

TABLE 1. Utilization guidelines for beetle-killed trees

PRODUCT	Class A	Class B
Lumber--appearance	Not recommended	Not recommended
Lumber--dimension	Can be used with caution	Not recommended
Lumber--decorative boards and paneling	Can be used	Can be used
Posts, poles, piling	Not recommended	Not recommended
Plywood	Can be used	Not recommended
Hardboard, particleboard, medium-density fiberboard	Can be used	Can be used
Pulp	Can be used	Can be used
Fuelwood	Can be used	Can be used

Application of these guidelines depends on the willingness of loggers to salvage the timber. Generally, salvaging will not be a problem with "Class A" trees. But, the tops and branches of "Class B" trees are often very fragile, and these trees must be salvaged with care.

This fact sheet was prepared by Michael P. Levi, In Charge, Extension Forest Resources, North Carolina State University, Raleigh, N. C. 27607. Additional information on types of tree deterioration and subsequent effects of deterioration on wood properties is presented in Agricultural Handbook 572, "A Guide for Using Beetle-Killed Southern Pine Based on Tree Appearance." The guidelines mentioned in this fact sheet and the Agricultural Handbook are based on research conducted by North Carolina State University, Virginia Polytechnic Institute and State University, and the Texas Forest Service.

U. S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
SUITE 901 1720 PEACHTREE ST., N. W.
ATLANTA, GEORGIA 30309

OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE, $300

POSTAGE AND FEES PAID
U. S. DEPARTMENT OF AGRICULTURE
AGR-101

U.S.MAIL